

Amendments to the Claims

Claims 1-6 (Canceled).

Claim 7 (Currently amended): A thin film chip resistor resistant to moisture without use of metallic tantalum and without use of a screen-printed moisture barrier comprising: a substrate; a single continuous metal thin film resistive layer directly attached to the substrate, the metal thin film layer being non-tantalum; a non-tantalum chip resistor termination attached on each end of the metal thin film resistive layer; an outer moisture barrier consisting of tantalum pentoxide directly overlaying and contacting the metal thin film resistive layer for reducing failures due to electrolytic corrosion under powered moisture conditions; and the outer moisture barrier formed from deposition of tantalum oxide on the metal thin film resistive layer and not through oxidation of tantalum.

Claim 8 (Original): The thin film resistor of claim 7 wherein the metal film layer is an alloy containing nickel.

Claim 9 (Original): The thin film resistor of claim 7 wherein the metal film layer is an alloy containing chromium.

**Claim 10 (Original):** The thin film resistor of claim 7 wherein the metal film layer is a nickel-chromium alloy.

**Claim 11 (Canceled).**

**Claim 12 (Original):** The thin film resistor of claim 7 wherein the tantalum pentoxide layer is overlaid by sputtering.

**Claim 13 (Currently amended):** A nickel-chromium alloy thin film chip resistor resistant to moisture without use of metallic tantalum and without use of a screen-printed moisture barrier comprising:  
an alumina substrate;  
a single nickel-chromium alloy thin film layer directly contacting the substrate;  
a non-tantalum chip resistor termination attached on each end of the nickel-chromium alloy thin film;  
an outer moisture barrier consisting of tantalum pentoxide directly overlaying and contacting the nickel-chromium alloy thin film layer for reducing failures due to electrolytic corrosion under powered moisture conditions; and  
the outer moisture barrier formed from deposition of tantalum oxide on the nickel-chromium alloy thin film layer and not through oxidation of tantalum.

**Claim 14 (Canceled).**

**Claim 15 (Currently amended):** A nickel-chromium alloy thin film chip resistor resistant to moisture without use of metallic tantalum and without use of a screen-printed moisture barrier comprising:

an alumina substrate;

a single nickel-chromium alloy thin film layer directly contacting the substrate;

a non-tantalum chip resistor termination attached on each end of the nickel-chromium alloy thin film;

a passivation layer directly overlaying and contacting the nickel-chromium alloy layer;

an outer moisture barrier consisting of tantalum pentoxide directly overlaying and contacting the passivation layer for reducing failures due to electrolytic corrosion under powered moisture conditions; and

the outer moisture barrier formed from deposition of tantalum oxide on the passivation layer and not through oxidation of tantalum.

**Claim 16 (Canceled).**

**Claim 17 (Previously presented):** A thin film chip resistor resistant to failures due to electrolytic corrosion under powered moisture conditions without use of a tantalum nitride system and without use of a screen-printed moisture barrier, comprising:

a substrate;

a single thin film resistive element overlaid on the substrate;

a chip resistor termination attached on each end of the thin film resistive element; and

an outer moisture barrier consisting of tantalum pentoxide directly overlaying and contacting the thin film resistive element to reduce failures due to electrolytic corrosion under powered moisture conditions.

**Claim 18 (Previously presented):** The thin film chip resistor of claim 17 wherein the outer moisture barrier prevents failure after MIL-STD-202 testing.

**Claim 19 (Previously presented):** The thin film chip resistor of claim 17 wherein the chip resistor termination is wrap around termination.

**Claim 20 (Previously presented):** The thin film chip resistor of claim 17 wherein the thin film resistive element is a metal thin film resistive element.